

Listing of the Claims

This listing of the claims will replace all prior versions and listings of the claims in the application:

1. (amended) An input device comprising:
a transparent substrate;
an array of optical sensors disposed on the substrate, the optical sensor array comprising: a plurality of pixels arranged in rows and columns, each pixel comprising at least a first optical sensor defining at least one row element and at least a second optical sensor defining at least one column element;
an array of conductive traces disposed on the substrate, the conductive trace array comprising: at least a first conductive trace defining a row signal pathway and at least a second conductive trace defining a column signal pathway; and
wherein the array of optical sensors generate signals on the array of conductive traces upon excitation by electromagnetic radiation.
2. (original) The input device of claim 1 wherein the first optical sensor comprises an output defining a row signal.
3. (original) The input device of claim 1 wherein the second optical sensor comprises an output defining a column signal.
4. (original) The input device of claim 2 wherein the second optical sensor comprises an output defining a column signal.
5. (original) The input device of claim 1 wherein the substrate comprises a material having glass.
6. (original) The input device of claim 1 wherein the electromagnetic radiation comprises visible light.

7. (original) The input device of claim 1 wherein the electromagnetic radiation comprises infra-red light.
8. (original) The input device of claim 1 wherein the first or second optical sensors comprise an output defining a row or column first state and a row or column second state.
9. (original) The input device of claim 8 wherein the first state comprises a first signal level.
10. (original) The input device of claim 9 wherein the second state comprises a second signal level.
11. (amended) A display comprising:
 - a screen for displaying images; and
 - an input device comprising:
 - a transparent substrate;
 - an array of optical sensors disposed on the substrate, the optical sensor array comprising: a plurality of pixels arranged in rows and columns, each pixel comprising at least a first optical sensor defining at least one row element and at least a second optical sensor defining at least one column element;
 - an array of conductive traces disposed on the substrate, the conductive trace array comprising: at least a first conductive trace defining a row signal pathway and at least a second conductive trace defining a column signal pathway; and
 - wherein the array of optical sensors generate signals on the array of conductive traces upon excitation by electromagnetic radiation.
12. (original) The display of claim 11 wherein the first optical sensor comprises an output having a row signal and wherein the row signal comprises a first and second state.

13. (original) The display of claim 12 wherein the second optical sensor comprises an output having a column signal and wherein the column signal comprises a first and second state.

14. (original) The display of claim 11 wherein the row signal switches from the first to the second state upon electromagnetic excitation of the first optical sensor.

15. (original) The display of claim 14 wherein the column signal switches from the first to the second state upon electromagnetic excitation of the second optical sensor.

16. (original) The display of claim 11 further comprising a row and column output.

17. (amended) A computer system comprising:

a computer; and

a display comprising:

a screen for displaying images; and

an input device comprising:

a transparent substrate;

an array of optical sensors disposed on the substrate, the optical sensor array comprising: a plurality of pixels arranged in rows and columns, each pixel comprising at least a first optical sensor defining at least one row element and at least a second optical sensor defining at least one column element;

an array of conductive traces disposed on the substrate, the conductive trace array comprising: at least a first conductive trace defining a row signal pathway and at least a second conductive trace defining a column signal pathway; and

wherein the array of optical sensors generate signals on the array of conductive traces upon excitation by electromagnetic radiation.

18. (previously presented) The system of claim 17 wherein the first optical sensor comprises an output having a row signal and wherein the row signal comprises a first and second state.

19. (previously presented) The system of claim 18 wherein the second optical sensor comprises an output having a column signal and wherein the column signal comprises a first and second state.

20. (previously presented) The system of claim 18 wherein the row signal switches from the first to the second state upon electromagnetic excitation of the first optical sensor.

21. (previously presented) The system of claim 19 wherein the column signal switches from the first to the second state upon electromagnetic excitation of the second optical sensor.

22. (currently amended) An input device comprising:
a transparent substrate;
an array of optical sensors disposed on the substrate, the optical sensor array comprising: at least a first optical sensor defining at least one row element and at least one column element, wherein the row and column element share a common output node of the optical sensor;

an array of conductive traces disposed on the substrate, the conductive trace array comprising: at least a first conductive trace defining a row signal pathway and at least a second conductive trace defining a column signal pathway; and

wherein the array of optical sensors generate signals on the array of conductive traces upon excitation by electromagnetic radiation.

23. (currently amended) An input device comprising:
transparent substrate means;

optical sensing means disposed on the substrate means and defining at least one row element and at least one column element, the row and column element share common output node of the optical sensing means;

row signal means and column signal means disposed on the substrate means;
and

wherein the optical sensing means generates signals on the row signal means and column signal means upon excitation by electromagnetic radiation.

Claims 24-34 (cancelled) (without prejudice or disclaimer as being directed to a non-elected invention(s)).

35. (currently amended) An input device comprising:

a transparent substrate means;

a circuit means disposed on the substrate means for sensing electromagnetic radiation and generating row and column signals upon excitation by electromagnetic radiation, the circuit means comprising a plurality of pixels means arranged in rows and columns, each pixel means comprising at least a first optical sensing means defining at least one row element and at least a second optical sensing means defining at least one column element; and

a conductive means disposed on the substrate means comprising row and column signal pathways.

36. (previously presented) An input device comprising:

a transparent substrate; and

an array of pixel circuits in physical communication with the substrate, each pixel circuit comprising at least one optical sensor having a row and column output and wherein the row and column output share a common output node of the optical sensor.

37. (previously presented) The device of claim 36 wherein the row and column common output node of each pixel circuit is isolated from other pixel circuit row and column common output nodes.

38. (previously presented) An input device comprising:
a transparent substrate; and
an array of pixel circuits in physical communication with the substrate, each pixel circuit comprising a first optical sensor and a second optical sensor; the first optical sensor comprising a row output node and the second optical sensor comprising a column output node; and wherein the row output node is connected to all other pixel circuits in the row and the column node is connected to all other pixel circuits in the column.